

**Agency: Commerce, Community and Economic Development****Grants to Named Recipients (AS 37.05.316)****Grant Recipient: Alutiiq Pride Shellfish Hatchery****Project Title:**

# Alutiiq Pride Shellfish Hatchery - Alaska King Crab Research and Rehabilitation Project

**State Funding Requested: \$ 68,000****House District: 35 - R**

Future Funding May Be Requested

**Brief Project Description:**

Development of king crab nursery project

**Funding Plan:****Total Cost of Project: \$68,000**

	<u>Funding Secured</u>		<u>Other Pending Requests</u>		<u>Anticipated Future Need</u>	
	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>	<i>Amount</i>	<i>FY</i>
Federal Funds	\$105,000	2009				
Other	\$65,000	2009				
Total	\$170,000					

*Explanation of Other Funds:**Funding from Central Bering Sea Fishermen's Association***Detailed Project Description and Justification:**

With a \$68,000 state capital grant, hatchery participation in the king crab enhancement project would be ensured through FY2009. State dollars are necessary as a bridge to the matching dollars and to ensure that the nursery phase of the project is funded.

State funding for the nursery phase of the project would assist the hatchery with utility costs, materials and supplies, and partial funding for the project manager.

**Project Timeline:**

2008

**Entity Responsible for the Ongoing Operation and Maintenance of this Project:**

Alutiiq Pride Shellfish Hatchery

**Grant Recipient Contact Information:**

Contact Name:

Phone Number: (907) 224-5181

Address: PO Box 369

Seward, AK

Email: jjh@seward.net

Has this project been through a public review process at the local level and is it a community priority? ☐ Yes ☒ No

## Experimental Hatchery System for Depleted King Crab

The Alaska King Crab Research, Rehabilitation and Biology Program (AKCRRAB) is a collaboration between the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, Alaska Sea Grant, National Marine Fisheries Service, Alutiiq Pride Shellfish Hatchery, fishing organizations, coastal communities and Native groups. AKCRRAB is investigating the potential of stock enhancement for rehabilitation of depleted king crab stocks in Alaska. AKCRRAB has developed a plan to test new technologies for a king crab nursery program designed to efficiently produce juveniles for outplanting in approved enhancement projects.

One of the most important hurdles to overcome in efforts to rebuild depleted king crab stocks in Alaska is development of technology to provide juvenile crab large enough to avoid a host of predators, including other king crab.

Paradoxically, king crab, which are very large as adults, are very small (2mm) in their first juvenile stage (Fig. 1). Based on studies with other species of crabs and lobsters, the success of outplanting may be higher for older or larger individuals. Additionally, technology is needed to produce juveniles large enough to be tagged, providing an important tool for monitoring the contribution of stocked crab to the enhanced fisheries.

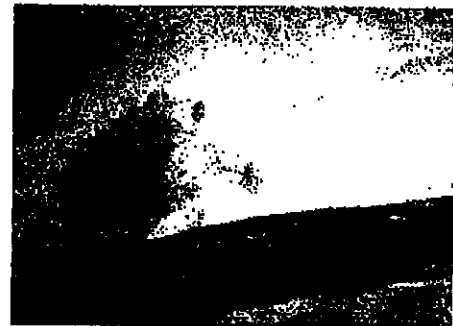
Since king crabs are highly cannibalistic during their early life stages, the project will test a variety of methods in hatchery tanks to provide the young crab with places to hide from

one another. Juvenile crab will be placed in unique containers or silos containing different substrates, including gillnet webbing, artificial seaweed and filter material. The juvenile crabs are particularly vulnerable during molting phases and the substrates are designed to emulate natural cover in the wild. Researchers also will test a variety of diets (frozen artemia or brine shrimp, and two commercial food commonly used to feed shrimp) and holding densities (500, 1000 and 2000 crabs/m<sup>2</sup>).

The hatchery also will initiate tests of a marine nursery systems designed to utilize naturally occurring "biofouling" as food for the juvenile crab. This innovative approach will attempt to eliminate the need to feed the crab and costs associated with operating a nursery in indoor tanks. These experiments will be conducted in large outdoor tanks at the hatchery.

The AKCRRAB research team is consulting with crab and lobster researchers in the United States, Russia, Chile, Argentina and Canada in efforts to tap the latest technology for crustacean nursery systems. This project will help keep Alaska in the forefront of efforts to rebuild weak king crab stocks.

Funding needed to initiate this new component of AKCRRAB technology is projected to be \$68,000 in FY08.



King crab larvae and juveniles are very small, approx. 2 mm in length at settlement. All photos by C. Leroux.



*Alutiiq Pride Shellfish Hatchery*  
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<b>Personnel</b>	
Project Manager	19000
Biologist	16000
Technician	8000
<b>Subtotal</b>	<b>43000</b>
<b>Materials</b>	
Supplies	4000
Equipment	5000
<b>Subtotal</b>	<b>9000</b>
<b>Utilities</b>	
Fuel Oil	11500
Electricity	3500
Water/Sewer/Garbage	1000
<b>Subtotal</b>	<b>16000</b>

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**From:** Rodger Painter [rodgerpainter@hotmail.com]  
**Sent:** Friday, April 04, 2008 10:35 AM  
**To:** [redacted]  
**Subject:** king crab match dollars

The hatchery has confirmation of the following match dollars for the king crab project:

FEDERAL - NOAA Fisheries - \$105,000

PRIVATE - Central Bering Sea Fishermen's Association - \$65,000

With the \$68,000 capital grant, hatchery participation in the king crab enhancement project would be ensured through FY 2009. The state dollars are necessary as a bridge to the matching funds and to ensure the vital nursery phase of the project is funded.

4/8/2008